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# METALLIC MINERALS

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# ROYALTY GUIDELINES

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**Alberta**

ENERGY AND  
NATURAL RESOURCES  
Mineral Revenues



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ENERGY AND  
NATURAL RESOURCES  
Mineral Revenues



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**ENR Technical Report Number: T/101**  
**ISBN 0-86499-284-x**

Administration of this program is the responsibility of the Synthetics, Tax and Other Royalties Branch of the Mineral Revenues Division, Alberta Energy and Natural Resources. Specific inquiries, requests for forms, and applications should be directed to:

Manager, Coal and Other Royalties  
Mineral Revenues Division  
Alberta Energy and Natural Resources  
9th Floor, North Petroleum Plaza  
9945 - 108 Street  
Edmonton, Alberta, Canada  
T5K 2G6  
Attention: Mrs. Burtine Kendall  
Telephone: (403) 422-5826

For additional copies and application forms, contact:

Information Centre  
Alberta Energy and Natural Resources  
Main Floor, Bramalea Building  
9920 - 108 Street  
Edmonton, Alberta, Canada  
T5K 2M4  
Telephone: (403) 427-3590

**OR**

Finance and General Services  
Alberta Energy and Natural Resources  
8th Floor, J.J. Bowlen Building  
620 - 7th Avenue S.W.  
Calgary, Alberta, Canada  
T2P 0Y8  
Attention: Mel Kirkland  
Telephone: (403) 297-6324

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# Preface

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In July 1984 the Government of Alberta enacted the Metallic Minerals Regulation (A.R. 246/84) under the Mines and Minerals Act to establish a land tenure system for metallic minerals and resolve many long-standing issues. Subsequently, a major review of metallic minerals royalty legislation was completed in conjunction with the Alberta Chamber of Resources. As a result of this review the Metallic Minerals Royalty Regulation (A.R. 353/85) was enacted on November 14, 1985.

The Crown royalty regime embodies the principle of economic rent to the Crown for its mineral resource and an equitable return to the successful developer. The royalty rates are structured to recognize the capital intensive nature of metallic mining and allow the lessees to recover their capital costs before full participation by the Crown. In brief, the regime employs a royalty rate of 1% of mine mouth revenue until allowable costs are recovered and a 12% net profits royalty as the Crown's share of a mine's revenue after costs are recovered, subject to a minimum royalty of 1% of the mine mouth revenue.

Overall, the Crown royalty regime is based on the production, recovery and sale or other use of metallic minerals produced from Alberta Crown lands and recovered through a single mine.

The purpose of these guidelines is to:

- explain the intent of the legislation
- outline the royalty calculation
- describe allowable costs
- describe reporting procedures, records, systems, access and information
- illustrate the calculation of royalty

This manual serves as a guide to understanding the new metallic mineral royalty legislation. The information is of an administrative, procedural and explanatory nature; the legislation contained in Alberta Regulation 353/85 remains the final authority.

The department would like to acknowledge the assistance of the Alberta Chamber of Resources in preparing these guidelines.

Information regarding land tenure and other facets related to metallic mineral exploration and development is contained in *Metallic Minerals of Alberta*, published by Alberta Energy and Natural Resources, Mineral Resources Division (ENR Technical Report No. T/102).



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# Legislative Intent

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The rules governing the recovery and disposition of metallic minerals are contained in two regulations: the Metallic Minerals Regulation (A.R. 246/84) which covers the land tenure regime, and the Metallic Minerals Royalty Regulation (A.R. 353/85) which covers the royalty regime.

The approach taken to land tenure by the Alberta Crown is to lease metallic minerals rights, but not to sell them outright. The Department of Energy and Natural Resources therefore issues agreements to companies or individuals to enable them to undertake metallic minerals exploration and development. In the 1984 Metallic Minerals Regulation (A.R. 246/84), changes were made to simplify the system of lease administration. These changes will help to create an environment which encourages exploration and development.

The regulation defines metallic minerals as follows:

All minerals that are vested in or belong to the Crown in right of Alberta are metallic minerals for the purpose of the Act, except:

- (a) placer minerals as defined in the Placer Mining Regulation (Alta. Reg. 41/81),
- (b) coal, petroleum, natural gas and oil sands,
- (c) quarriable minerals, and
- (d) any mineral that is extracted in salt form.

Any mineral resource falling within this definition is subject to the Crown royalty applicable to metallic minerals.

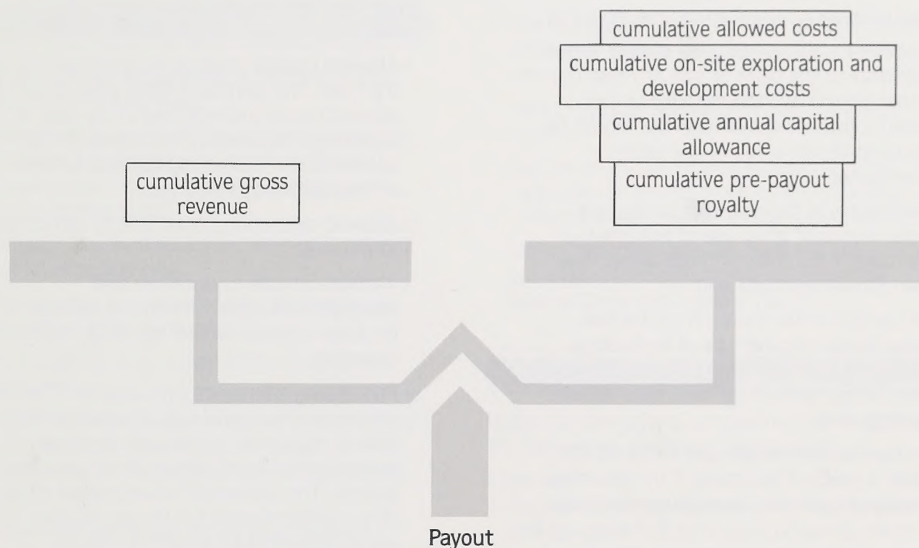
The royalty regime outlined in the Metallic Minerals Royalty Regulation (A.R. 353/85) creates a two-stage royalty which gives the province, as owner of the resource, a reasonable return while rewarding a lessee's success. The first stage requires a lessee to pay a 1% mine mouth royalty from the commencement of operation of the mine (pre-payout) until the costs are recovered (payout). In the second stage (post-payout), a lessee pays the greater of (1) a 12% net profits royalty based on gross revenues less allowable costs or (2) a minimum royalty equal to 1% of mine mouth revenues. Royalty is determined for each mine in which a lessee has an interest.

The royalty regime described in this guideline will be fixed for a 10-year period from the month of first sale of a substance recovered from a metallic mineral lease, as long as this occurs before January 1, 1996.



# Royalty Calculation Outline

This section is intended to provide an understanding of the calculation of payout, pre-payout royalty and post-payout royalty.



## Payout

The concept of payout is important because it is the point at which the royalty structure changes. Payout represents a balance between the accumulated allowable costs and the gross revenues of a mine.

Payout is determined as the date on which the sum of the cumulative allowed costs, cumulative on-site exploration and development costs, cumulative annual capital allowance and cumulative pre-payout royalty equals the cumulative gross revenue of the mine.

**Cumulative allowed costs** — The sum of allowed capital costs and allowed operating costs incurred up to that date.

**Cumulative on-site exploration and development costs** — The sum of allowed exploration and development costs directly associated with the lease or leases which fall

within the mine boundary and are incurred up to that date.

**Cumulative annual capital allowance** — The sum of the 15% annual allowances calculated on the average unrecovered allowed capital costs in a year up to that date. Where the period to which the allowance applies is less than a full year, the allowance must be reduced to reflect only the eligible period of the year.

**Cumulative pre-payout royalty** — The sum of the monthly royalty paid, as calculated at 1% of the mine mouth revenue, up to that date.

**Cumulative gross revenue** — The sum of the monthly gross revenues up to that date.

## Pre-Payout Royalty

Before payout is achieved, a monthly royalty of 1% of mine mouth revenue is payable to the Crown by each lessee.

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**Mine mouth revenue** — The sum of gross revenues for the month less the sum of:

1. all reasonable handling, processing and transportation costs incurred during the month, between the mine mouth and the point of sale or other use within Alberta, and
2. the portion of a 15% annual allowance attributable to that month, calculated on the allowed capital costs between the mine mouth and the point of sale or other use within Alberta.

**Gross revenue** — The sum for the month of:

1. the product of the unit price of each leased substance at the point of sale or other use within Alberta and the quantity of each leased substance delivered in the month to the point of sale or other use within Alberta, and
2. the receipts in the month from the sale, lease, licence or other use of any assets of the mine, if the costs of those assets have been allowed as costs, and
3. the receipts in the month from the sale, lease, licence or other use of technology relating to the mine to the extent that any costs of that technology have been allowed as costs, and
4. the insurance proceeds paid in the month under a policy of insurance if the insurance premiums paid have been allowed as costs.

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## Post-Payout Royalty

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The monthly royalty payable to the Crown for each month after payout occurs is the greater of:

1. 1% of mine mouth revenue for the month, or
2. 12% of net revenue for the month, where  
Monthly royalty = 12% (R - C)

Net revenue (R - C) for the month is the gross revenue (R) for the month (as previously defined) minus the sum of the following allowed costs (C) which are allocated to the mine for that month in accordance with this policy:

- **Allowed capital costs** directly attributable to the mine. This permits 100% write down of allowed capital expenditures in the year of acquisition. Included in this category is an allowance for indirect capital costs of 1% of the capital costs incurred.
- **Allowed operating costs** directly attributable to the mine.
- **Allowed on-site exploration and development costs** directly attributable to the lease or leases which fall within the mine boundary.
- **Processing allowance** calculated at 10% per annum of the original cost of assets directly related to processing between the mine mouth and point of sale or other use within Alberta. This allowance cannot exceed 65% of the gross revenue for the period that would otherwise be subject to royalty.
- **Operating losses** carried forward from prior periods. Such losses may be carried forward until recovered. The calculation of an operating loss excludes royalty paid to the Crown.
- **Approved mine closing costs** for the period. Application for the approval of mine closing costs may be made to the minister at any time but no later than one year before the projected closing of the mine and may, after approval, be amortized over the remaining years of mine operations. Mine closing costs may not be applied retroactively.
- **Allowed off-site exploration costs** incurred in Alberta by the lessee before the commencement of mining operations and determined to have been reasonably necessary for the exploration of leased substances.



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# Allowable Costs

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In calculating royalties, allowable costs must be directly associated with the costs incurred by a lessee in the operation of a mine. Allowable costs including capital, operating, off-site exploration, processing allowance and mine closing costs are subject to some general provisions.

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## General Provisions

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1. A cost will be permitted as an allowable cost only to the extent that it is:
  - within a category of allowed capital costs, allowed operating costs, allowed off-site exploration costs, processing allowance, or mine closing costs,
  - directly attributable to the mine or in respect of an allowable cost,
  - reasonable in relation to the circumstances under which it is incurred,
  - incurred by or on behalf of the lessees for the mine,
  - incurred in connection with the production, processing or delivery of the leased substance to the point of sale or other uses within Alberta.
2. A cost will not be permitted as an allowed capital cost, allowed operating cost, allowed off-site exploration cost, processing allowance or allowed mine closing cost if it is:
  - the overhead of the operator or lessee,
  - an interest payment or in lieu of interest,
  - a fine or penalty,
  - a sales commission.
3. A cost for rent or other lease payments which, in the case of a specific item exceeds \$100 000 in a year, will be permitted as an allowed operating cost until such time as the aggregate permitted costs, resulting from the rental or lease of that item, equal the costs that would have been permitted for that item if it had been purchased and treated as an allowed capital cost. Under exceptional circumstances, the minister may, in writing, allow costs for an item which are in excess of the costs that would have been permitted for the item if it had been purchased and treated as an allowed capital cost.

4. Allowed capital costs, allowed operating costs or allowed off-site exploration costs shall be reduced by:

- any credits or discounts actually received, and
- any economic assistance including grants, subsidies or credits given by the province, which are attributable to the costs involved,

but no reduction shall be made for any tax-related economic assistance under the Alberta Corporate Income Tax Act.

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## Allowed Capital Costs

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Subject to the general provisions, following are the categories of allowed capital costs.

Costs of:

1. Acquisition or construction of property, plant and equipment or to replace property, plant and equipment acquired or constructed, including:
  - purchase of laid-down equipment, materials and supplies before installation or assembly,
  - construction, installation, assembly or erection of plant, equipment and support facilities, including costs of direct labor, benefits and construction overhead costs. Construction overhead costs are costs that are contractually required to be paid to a person other than the operator or a lessee. These costs must be directly related to constructing, installing, assembling or erecting a plant and equipment, however the costs cannot be identified with a specific plant and equipment.
  - purchase of land and buildings.
2. Repair and maintenance of an asset if those costs equal or exceed 50% of the cost of an equivalent new asset.
3. Salaries, wages, benefits, training and travel of the operators' and lessees' employees whose work is directly attributable to the



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mine, to the extent of the portion of the labor of those employees that is directly attributable and charged to capital programs of the mine.

4. Municipal and regional improvements required by a government or government authority and directly attributable and charged to capital programs of the mine.
5. Licensed or purchased technology, including patents and other proprietary rights, if the costs are payable to:
  - a person other than a lessee or an affiliate, or
  - the lessee or an affiliate, and such costs have been approved by the minister.
6. On-site exploration and development programs directly related to the mine and attributable and charged to capital programs of the mine.
7. An allowance of 1% of the costs referred to in items 1 through 6 above, as indirect capital costs.

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### Allowed Operating Costs

Subject to the general provisions, following are the categories of allowed operating costs.

Costs of:

1. Salaries, wages, benefits, training, travel and relocation of operators' and lessee's employees whose work is directly attributable to the mine to the extent of the portion of the labor of those employees that is attributable and charged to the mine but is not included as allowed capital costs or mine closing costs.
2. Contract labor, materials, supplies, chemicals, catalysts and services, including professional services.
3. Rent or other lease payments for equipment, plant and buildings.
4. Telecommunications, power, water, sewage disposal and utility construction contribution payments.
5. Insurance and security.
6. Municipal land taxes.
7. Municipal and regional improvements that are required by a government or government authority and that are directly attributable and charged to the mine but which are not included as allowed capital costs or mine closing costs.

8. Maintaining metallic mineral rights and surface rights.

9. Repairs and maintenance of an asset if these costs are less than 50% of the cost of an equivalent new asset.

10. On-site exploration and development programs directly related to the mine and attributable and charged to operating programs of the mine.

11. An allowance of 10% of the costs referred to in items 1 through 10 above, as indirect costs in lieu of overheads.

A cost will not be allowed as an allowed operating cost unless it is incurred on or after the first day on which mining commences at the mine.

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### Allowed Off-Site Exploration Costs

Subject to the general provisions, the allowed off-site exploration costs consist of off-site exploration costs incurred and determined to have been reasonably necessary for the exploration of leased substances. Any unrelieved portion of allowable off-site exploration costs may be carried forward for relief in future years.

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### Processing Allowance

Subject to the general provisions, the processing allowance is an annual allowance of 10% of the original capital cost of assets directly related to processing between the mine mouth and point of sale or other disposition within Alberta. This allowance cannot exceed 65% of the revenue that would otherwise be subject to royalty and is only applicable in the post-payout period.

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### Mine Closing Costs

Application for mine closing costs may be made to the minister at any time, but no later than one year before the projected closing of the mine. The application must represent the lessee's best estimate of costs to be incurred subsequent to the closure of the mine.

When an application has been approved, the lessee may amortize those costs over the remaining years of mine operations. Mine closing costs may not be applied retroactively.

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# Reporting Requirements

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This section outlines the royalty reports to be submitted, the records to be maintained, the information access to be provided and the manner in which disputes are to be settled by the lessees with the Department of Energy and Natural Resources.

## Reporting

During the time in which pre-payout royalty is payable the lessees are to file monthly reports with the department. The reports must show, for each month:

1. Amount of minerals obtained.
2. Amount and details of sale or disposal of minerals.
3. Calculation of gross revenue.
4. Calculation of allowed handling, processing and transportation costs incurred.
5. Calculation of the 15% annual allowance.

Reports must be filed not later than 30 days after the end of the month during which the mineral was obtained or disposed of, or the last day of the month following the month that the mineral was obtained or disposed of, whichever is later.

As a condition of being allowed cost deductions, lessees are required to provide to the department, not later than 90 days after the end of each period in which pre-payout royalty is payable:

1. A statement indicating when the payout is expected to occur.
2. A statement certified by two officers of the lessee containing the following information for that period:
  - costs that have been included in the allowed cumulative projects costs,
  - revenues that have been included in the cumulative deemed gross revenue,
  - amount of minerals obtained,
  - total volume and details of leased substances delivered from the mine boundary,
  - calculation of gross revenue,
  - calculation of allowed costs,
  - calculation of the 15% annual allowance attributable,
  - an opinion by the lessees' auditors on whether or not the lessees have complied with the

royalty requirements, and on whether or not the information submitted is presented fairly in accordance with generally accepted accounting principles.

During the months in which post-payout royalty is payable the lessees are to file monthly reports with the department. The reports must show, for each month:

1. Amount of minerals obtained.
2. Amount and details of sale or disposal of minerals.
3. Calculation of gross revenue.
4. Calculation of allowed costs, by category.

Reports must be filed not later than 30 days after the end of the month during which the mineral was obtained or disposed of, or the last day of the month following the month that the mineral was obtained or disposed of, whichever is later.

As a condition of being allowed any cost deductions, lessees are required to provide to the department, not later than 90 days after the end of each period in which post-payout royalty is payable:

1. A detailed calculation of the royalty payable for the period.

This must specify the allowed capital costs, allowed operating costs, allowed on-site exploration and development costs, processing allowance, operating losses carried forward from prior periods, allowed mine closing costs, and allowed off-site exploration costs that have been included for the period. The lessee must also provide a detailed calculation of gross revenue for the period.

2. A statement of the total volume of leased substances delivered from the mine boundary during the period.
3. An opinion by the lessees' auditors on whether or not the lessees have complied with the royalty requirements, and on whether or not the information submitted is presented fairly in accordance with generally accepted accounting principles.

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Where the sum of the monthly royalty paid in any period is greater or lesser in amount than that which is actually calculated for that period, the overpayment or underpayment is to be adjusted through a separate payment to be made immediately by either the lessee or the department. Any amount that is due but which remains unpaid is to bear interest on the outstanding balance from the time that the payment was originally due. Interest is to be calculated daily at a yearly rate 1% greater than the rate of interest prescribed by the Superintendent of Treasury Branches from time to time as the regular prime rate for the Province of Alberta Treasury Branches and that is in effect on the first day of the month in which that day occurs.

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### **Records, Systems, Access and Information**

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The lessees are to maintain separate records for each mine of such accounting, financial and quantitative reporting systems as required by the department. Records must be kept until the expiration of five years following the end of the year to which the information contained in the records relates. The department may specify in writing any records to be retained for any longer period.

In determining allowed costs, Canadian generally accepted accounting principles are to be applied. The records are to be kept at the lessee's place of business in Alberta, or at a place in Alberta approved in writing by the minister.

The lessee may be required to submit to the department a written return showing in detail

information related to the mining operations, minerals recovered, allowable cost of recovering minerals or any records required to be maintained by the lessee. Notice will be given in writing, with a time limit for the response.

The lessee to whom the notice is given may comply by permitting any person designated by the department to audit the records to which the notice relates and, on the request of that person, to take them away for further examination or copying.

The department may recalculate or make additional calculations of the Crown's royalty at any time if it feels a recalculation is necessary because of misrepresentation, neglect, carelessness, wilful default, fraud or failure to supply reports or other information. The calculation may also include interest payable. In the absence of neglect, carelessness, wilful default or fraud, the time limit for the recalculation of royalty is four years following the due date.

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### **Handling Disputes**

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A lessee may appeal any decision of the department in writing to the associate deputy minister within 90 days of the date of the notice of the decision. Additional information must be presented in the appeal statement to justify a review of the department's decision.

The associate deputy minister will review the appeal and advise the lessee of the result. If the appeal is granted and the previous decision is overruled, the benefit will be applied from the month in which the original decision was attributable.



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# Glossary

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**Development** — An operation which is either

- a) an investigation of the subsurface to determine the extent, quality or nature of a known deposit of metallic minerals during the operation in preparation for mining a metallic mineral, or
- b) an operation on the surface or subsurface in preparation for mining a metallic mineral, or to increase approved capacity,

but which is not included within the definition of either exploration or mining.

**Exploration** — An operation which is either

- a) an operation over land or water to determine geologic or other conditions underlying the surface of land or water for the purpose of discovering metallic mineral deposits, or
- b) an investigation of the subsurface for the purpose of discovering metallic mineral deposits,

but which is not included within the definition of development.

**Leased substance** — A substance that may be recovered from a mine pursuant to an agreement issued by the minister granting rights to metallic minerals that are the property of the Crown in right of Alberta, and includes a product or by-product obtained by processing or reprocessing the substance.

**Lessee** — The title holder of the lease according to the records of the Department of Energy and Natural Resources, and any successor in title to all or part of the lessee's interest in the lease.

**Manufactured product** — A product obtained by applying processes beyond the stage of processing to a leased substance.

**Metallic mineral** — A mineral prescribed as a metallic mineral by the Metallic Minerals Regulation (Alta. Reg. 246/84).

**Metallic minerals lease** — A lease under the Mines and Minerals Act granting rights in respect of metallic minerals.

**Mine boundary** — The outside perimeter of the lands that are the subject of a metallic minerals mine permit.

**Mine mouth** — The point at which a recovered leased substance is available for processing or the entry to the mine from which the leased substance was recovered, whichever is closer to where the leased substance was recovered.

**Mine mouth revenue** — The amount by which the gross revenue for a mine exceeds the allowable costs and allowances.

**Mining** — The extraction of a leased substance from or in any mine and the transportation of that leased substance to the mine mouth.

**Month of first sale** — The month in which a sale or other disposition, consumption or removal from

Alberta of a leased substance recovered from a mine first occurs.

**Net revenue** — The amount by which the gross revenue for a mine exceeds the deductible costs and allowances for the mine.

**On-site** — Any activity occurring on or under the lands within a mine boundary.

**Payout** — The date on which the gross revenue for a mine equals the aggregate of allowable costs and allowances for the mine computed from the month of first sale.

**Period** — A calendar year, except that in a calendar year which includes the date of payout the following shall be considered separate periods:

- a) the time from the beginning of the year to and including the month in which the date of payout occurs, and
- b) the time commencing with the month following the month in which payout occurs to the end of that year.

**Point of sale or other disposition** — The point within Alberta at which the leased substance is:

- a) sold,
- b) otherwise disposed of or consumed in Alberta, or
- c) loaded for transport for removal from Alberta,

whichever occurs first.

**Processing** — Crushing, grinding, beneficiation, concentration, smelting or refining.

**Records** — Records as defined in the Financial Administration Act (Alberta). Record is currently defined to mean:

- a) an account, book, return, statement, report, financial document or other memorandum of financial or non-financial information whether in writing or in electronic form or represented or reproduced by any other means, and
- b) the results of the recording of details of electronic data processing systems and programs to illustrate what the systems and programs do and how they operate.

**Unit price** — The fair value per unit of a leased substance as determined by the minister or the proceeds per unit of the leased substance that has been sold.

**Year** — Calendar year.

**Cost** — A cost will be considered to have been incurred:

- a) in the month in which the obligation to pay first arose, if payment is made no more than 60 days after the obligation to pay first arose, or
- b) in the month in which payment is made, if payment is made more than 60 days after the obligation to pay first arose.

# Illustration of the Royalty Calculation

## Eligible Capital Costs (\$ 000)

	Year 1	Year 2	Year 3	Total	Years 4-13
Exploration	\$ 4 000	—	—	\$ 4 000	—
Development	5 000	—	—	5 000	—
Mine			10 000	10 000	—
Mill	10 000	10 000	10 000	30 000	—
Smelter	10 000	20 000	20 000	50 000	—
	<u>\$29 000</u>	<u>\$30 000</u>	<u>\$40 000</u>	<u>\$99 000</u>	<u>—</u>
1% Indirect costs allowance	290	300	400	990	—
	<u>\$29 290</u>	<u>\$30 300</u>	<u>\$40 400</u>	<u>\$99 990</u>	<u>—</u>

Off-site exploration (not an eligible capital cost) at \$1 000 per year.

\$10 000

## Operating Revenues and Costs (\$ 000)

	Year 4	Year 5	Year 6	Year 7	Year 8
Gross revenue	65 000	69 000	75 000	80 000	86 000
Operating costs*					
Mine	28 000	30 000	33 000	39 000	42 000
Beyond mine	12 000	13 000	14 000	11 000	12 000
	<u>40 000</u>	<u>43 000</u>	<u>47 000</u>	<u>50 000</u>	<u>54 000</u>
Net operating	<u>25 000</u>	<u>26 000</u>	<u>28 000</u>	<u>30 000</u>	<u>32 000</u>
Mine mouth revenue					
Gross revenue	65 000	69 000	75 000	80 000	86 000
Costs beyond mine (operating)	12 000	13 000	14 000	11 000	12 000
15% capital allowance	12 000	12 000	12 000	12 000	12 000
Mine mouth revenue	<u>41 000</u>	<u>44 000</u>	<u>49 000</u>	<u>57 000</u>	<u>62 000</u>
1% Crown royalty	410	440	490	570	620

\* Operating costs consist of: Allowed operating costs  
Allowed on-site exploration and development costs  
Approved mine closing costs  
An allowance of 10% for indirect costs

## Payout Calculation (\$ 000)

Payout occurs in Year 9 Month 5

	Capital Costs	Capital Cost Allowance
Capital to beginning of Year 4	\$99 990	
Capital allowance to beginning of Year 4		\$20 831
<b>Year 4</b> Net revenue minus Crown royalty 25 000 – 410 = 24 590	<u>24 590</u>	
	\$75 400	
Capital allowance $\frac{75\,400 + 99\,990 \times 15\%}{2}$		<u>13 154</u>
		\$33 985
<b>Year 5</b> Net revenue minus Crown royalty 26 000 – 440 = 25 560	<u>25 560</u>	
	\$49 840	
Capital allowance $\frac{75\,400 + 49\,840 \times 15\%}{2}$		<u>9 393</u>
		\$43 378
<b>Year 6</b> Net revenue minus Crown royalty 28 000 – 490 = 27 510	<u>27 510</u>	
	\$22 330	
Capital allowance $\frac{49\,840 + 22\,330 \times 15\%}{2}$		<u>5 413</u>
		\$48 791
<b>Year 7</b> Net revenue minus Crown royalty 30 000 – 570 = 29 430	<u>22 330</u>	<u>7 100</u>
	—	\$41 691
Capital allowance $\frac{22\,330 \times 15\%}{2}$		<u>1 675</u>
		\$43 366
<b>Year 8</b> Net revenue minus Crown royalty 32 000 – 620 = 31 380		<u>31 380</u>
		\$11 986
<b>Year 9</b> Net revenue minus Crown royalty 34 000 – 670 = 33 330		
33 330 x $\frac{5}{12}$ = 13 887		<u>11 986</u>
	—	—

Year 9	Year 10	Year 11	Year 12	Year 13	TOTAL
94 000	103 000	112 000	120 000	129 000	933 000
45 000	46 000	47 000	52 000	54 000	416 000
<u>15 000</u>	<u>18 000</u>	<u>20 000</u>	<u>16 000</u>	<u>18 000</u>	<u>149 000</u>
60 000	64 000	67 000	68 000	72 000	565 000
<u>34 000</u>	<u>39 000</u>	<u>45 000</u>	<u>52 000</u>	<u>57 000</u>	<u>368 000</u>
94 000	103 000	112 000	120 000	129 000	933 000
15 000	18 000	20 000	16 000	18 000	149 000
<u>12 000</u>	<u>12 000</u>	<u>12 000</u>	<u>12 000</u>	<u>12 000</u>	<u>120 000</u>
<u>67 000</u>	<u>73 000</u>	<u>80 000</u>	<u>92 000</u>	<u>99 000</u>	<u>664 000</u>
670	730	800	920	990	6 640



## Post-Payout Royalty Calculation (\$ 000)

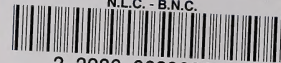
	Year 9	Year 10	Year 11	Year 12	Year 13
Gross revenue (R)	\$ 82 014*	\$103 000	\$112 000	\$120 000	\$129 000
Less allowable costs					
Operating costs	33 000	63 000	62 000	63 000	67 000
On-site exploration and development costs	2 000	1 000	—	—	—
Approved mine closing costs	—	—	5 000	5 000	5 000
Processing allowance	4 667	8 000	8 000	8 000	8 000
Off-site exploration	6 000**	1 000	1 000	1 000	1 000
Total allowable costs (C)	45 667	73 000	76 000	77 000	81 000
Net revenue for royalty purposes (R – C)	<u>\$ 36 347</u>	<u>\$ 30 000</u>	<u>\$ 36 000</u>	<u>\$ 43 000</u>	<u>\$ 48 000</u>
Crown royalty 12% (R – C)	<u>\$ 4 362</u>	<u>\$ 3 600</u>	<u>\$ 4 320</u>	<u>\$ 5 160</u>	<u>\$ 5 760</u>
Minimum royalty	<u>\$ 391</u>	<u>\$ 730</u>	<u>\$ 800</u>	<u>\$ 920</u>	<u>\$ 990</u>

\* Year 9 being the year of payout, gross revenue is \$94 000 less \$11 986 allocated to pre-payout period royalty.

\*\* Off-site exploration costs can all be absorbed since their inclusion does not reduce post-payout Crown royalty to below the minimum.



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